

Serial No. 09/740,088
Art Unit No. 2182

REMARKS

Claims 1-16 were currently pending in the patent application. By this amendment, Applicant introduces new claims 17 and 18. No additional filing fee is believed due for the introduction of two dependent claims, wherein the total number of claims does not exceed twenty total claims.

The Examiner has rejected Claims 5 and 14 as indefinite under 35 USC 112; has rejected Claims 1-4, 6, 10-13, and 15 under 35 USC 103 as unpatentable over Gooderum in view of Pulsipher; has rejected Claims 8-9 as unpatentable over Gooderum in view of Basani; and, has rejected Claims 5, 7, 14, and 16 as unpatentable over Gooderum in view of Pulsipher and further in view of Basani.

With regard to the rejections of the claims as indefinite, Applicant has amended the language of the Claims 5 and 14 to more clearly recite that the replication is ceased when all of the computers within an application's scope have installed copies.

The present invention provides a system, method and program storage device for defining the scope of an application in a distributed network and for using that defined application scope for controlling the growth of data

AUS920000828

-13-

Serial No. 09/740,088
Art Unit No. 2182

objects. Application scope is defined by the steps of using IP drivers having defined scope to discover the physical network, mapping the physical network, creating a logical network comprising components of said mapped physical network by determining logical paths for said application based on the logical network and aligning the logical paths for said application to the mapped physical network; and the defining the logical scope for the application based on the logical network and the physical network to include only those endpoints in the logical paths. Applicant has amended the language of Claim 1 and 10 to include the more detailed language regarding creating the logical network, as is found in the Specification on page 18.

Claims 1 and 10 have been rejected as unpatentable over Gooderum in view of Pulsipher. The Examiner has concluded that the Gooderum patent teaches the steps of defining the physical scope for each of the IP drivers in a distributed network and defining a logical scope for an application based on the logical network and the mapped physical network and has concluded that the Pulsipher patent teaches the steps of discovering the physical network by scanning with IP drivers, mapping the physical network, and creating a logical network comprising the components of the physical

AUS920000828

-14-

Serial No. 09/740,088
Art Unit No. 2182

network. For the reasons set forth below, Applicant disagrees with the Examiner's interpretation of the prior art.

The Gooderum patent is directed to a method for providing network security by dividing a network into regions (a.k.a., "burbs") and restricting communications between the burbs. Gooderum takes a physical network system 10 and splits it into separate regions, each region including a domain 16 and a protocol stack 12 with at least one network interface. The network interfaces, such as ethernet drivers 12.0 and 12.1 have a predefined set of data structures with routing information and protocol information. Any communications which are to be routed between regions must pass through proxy 14.

Applicant respectfully asserts that the Gooderum patent does not teach the steps of defining the physical scope for each of the IP drivers in a distributed network and defining a logical scope for an application based on the logical network and the mapped physical network. With regard to the step of defining the physical scope for each of the IP drivers in a distributed network, Gooderum provides no teachings of steps for defining. The cited passage from lines 40-50 in Col. 1 does not teach or suggest a defining

AUS920000828

-15-

Serial No. 09/740,088
Art Unit No. 2182

step. While a driver has predefined routing information, its scope is not defined. Since Gooderum restricts all network communications to pass through proxy 14, the scope of any Gooderum driver is within its region and a Gooderum driver simply does not have a scope within the distributed network.

Applicant notes that the same Gooderum passage has been cited for defining a logical scope for each application based on the logical network and the mapped physical network. Applicant avers that Gooderum does not teach steps for obtaining a logical network or for mapping a physical network. Accordingly, Applicant fails to see how Gooderum teaches defining a logical scope for an application based on a logical network and a mapped physical network. The cited passage from line 40-line 50 simply provides no teachings related to defining an application's logical scope, let alone defining such based on a logical network and a mapped physical network. Applicant notes that the Gooderum regions are collections of physical components grouped together in regions/domains for isolation purposes. In order to protect the software in a region, Gooderum restricts control of data and communications among different regions. Gooderum states that "a given packet, piece of data, control message, etc.

AUS920000828

-16-

Serial No. 09/740,088
Art Unit No. 2182

is bound to a particular stack at creation." Therefore, an application would not have a scope beyond the region on which it is installed.

Gooderum does discuss a process needing to communicate with different regions when the process is loaded across different burbs, with reference to Fig. 7. However, Gooderum does not teach or suggest defining a logical scope of the application. Rather, what Gooderum details are steps for examining code and for modifying the application code to eliminate the need for inter-region communications. Further, Gooderum allows certain processes to be "partially bound" so that necessary communications (i.e., those that cannot be eliminated) can occur. Applicant asserts that providing for "partially bound" processes teaches away from the claimed step of defining a logical scope for an application.

The means and steps for defining application scope logically for controlling the growth of data objects by self replicating applications in distributed networks are new. Prior art patents have not recognized that applications operating across distributed networks could perform self-replication so extensively as to clog the network. Accordingly, it had not been recognized that there is a need

AUS920000828

-17-

Serial No. 09/740,088
Art Unit No. 2182

to limit the logical scope of an application which is operating across a distributed network. Applicant has provided that recognition, and has provided a method and means for defining and utilizing something now called "application scope" or "logical application scope". Applicant respectfully asserts that "application scope" as claimed is defined by the present application (see: e.g., page 18 of the Specification) and is not the same as the physical scope which has been taught and claimed in the art.

Applicant respectfully asserts that the Pulsipher patent does not teach the steps of discovering the physical network by scanning with IP drivers, mapping the physical network, and creating a logical network comprising the components of the physical network. The Pulsipher patent is directed to a system and method for monitoring a distributed network, namely the internet. The cited teachings of the Pulsipher patent are found in Col. 6, from lines 11-64. Applicant has reviewed the cited passage and respectfully disagrees with the Examiner's conclusions. Pulsipher does not teach that IP drivers discover the physical network. Pulsipher mentions that topology data is discovered from the network (Col. 6, lines 61-62) but does not teach or suggest that IP drivers scan to discover. Pulsipher does state that

AUS920000828

-18-

Serial No. 09/740,088
Art Unit No. 2182

discovery/layout software communicates with operating system and network software (Col. 6, lines 36-40) which could simply mean accessing tables or requesting data from tables. Applicant concludes that the Pulsipher patent does not teach the step of discovering the physical network by scanning with IP drivers.

With regard to the claim step of mapping the physical network, the same passage from Col. 6 has been cited. Lines 52-60 do describe a network management map being constructed for display. However, with regard to the claim step of creating a logical network comprising the components of the mapped physical network, Applicant respectfully asserts that the cited passage does not mention a logical network, let alone creating a logical network comprising components of the mapped physical network. At Col. 3, lines 39-42, Pulsipher tells of combining different sets of topology data to create a global view of the network. However, that global view is a map of the physical network is not a logical network.

Applicant contends that, even if one were to modify Gooderum with Pulsipher, one would not arrive at the invention as claimed. By adding the map/display teachings of Pulsipher to Gooderum, the result would be a Gooderum

AUS920000828

-19-

Serial No. 09/740,088
Art Unit No. 2182

method for providing a submap of each defined physical region. The result would not, however, include steps for defining the physical scope for IP Drivers in the distributed network, discovering the physical network by scanning with the IP drivers, mapping the physical network into a graphical network representation, creating a logical network comprising components of the mapped physical network by determining logical paths for the application based on the logical network and aligning the logical paths for the application to the mapped physical network, and defining the logical scope for the application based on the logical network and the mapped physical network, wherein the logical scope includes only endpoints aligned to the logical paths, as is recited in the amended Claims 1 and 10.

In response to the rejection of Claims 2 and 11, Applicant disagrees with the Examiner that Gooderum obtains the logical scope for the application. As argued above, Gooderum does not teach or suggest defining or otherwise obtaining logical application scope, in the cited passage at Col. 1, lines 40-50 or otherwise. Further, the cited teachings found at Col. 10, lines 9-11 do not teach identifying a physical entity as within the logical scope of an application and then obtaining the physical scope for the

AUS920000828

-20-

Serial No. 09/740,088
Art Unit No. 2182

physical entity. Finally, Gooderum does not teach, at Col. 9, lines 1-5, the step of determining whether a given endpoint is within a defined application network. Gooderum can tell if a physical entity within a defined region, however, that is not the same as or suggestive of the claim language.

The Examiner acknowledges that Gooderum fails to teach accumulating the physical scopes of all physical entities and cites the teachings found in Pulsipher at Col. 6, lines 10-64. As argued above, Pulsipher teaches combining maps to obtain a global network map. There is nothing in Pulsipher, however, that teaches or suggests an application's logical network or any steps for determining a physical endpoint is within a logical application scope/network.

Applicant believes that, even if one were to modify Gooderum with Pulsipher, one would not arrive at the invention as claimed since neither teaches defining or otherwise obtaining an application scope or any use thereof. The foregoing arguments apply equally to the rejections of Claims 3-4, 6, 12-13 and 15, which depend from Claims 2 and 11. Since neither Gooderum nor Pulsipher teaches a logical application scope and the use thereof, it cannot be maintained that the combination teaches or suggests the

AUS920000828

-21-

Serial No. 09/740,088
Art Unit No. 2182

storing of the application network (Claims 3 and 12), the limiting of application's interactions based on the application's network (Claims 4 and 13), or the detailed steps for obtaining the logical scope for an application (Claims 6, 7, 15 and 16) as argued above with reference to the language of Claims 1 and 10.

In response to the rejections of Claims 8 and 9 based on the combination of teaching of Gooderum and Basani, Applicant relies on the arguments presented above with respect to the teachings of the Gooderum patent. Applicant disagrees with the Examiner's conclusion that Gooderum teaches, at Col. 2, lines 23-30, storage locations for storing the physical and application scopes. Since Gooderum neither teaches nor suggests defining otherwise obtaining scope for an application, it cannot be maintained that Gooderum stores application scope. Gooderum teaches storing data structures for routing and protocol information but does not teach storing application scope information.

The Examiner acknowledges that Gooderum fails to teach a Scope Manager for administering the scope for each of the at least one IP driver and the at least one application, wherein the Scope Manager is adapted to define the application scope. The Examiner concludes, however, that

AUS920000828

-22-

Serial No. 09/740,088
Art Unit No. 2182

Basani teaches a Scope Manager as claimed. The Basani Group Leader, as detailed in Col. 5 at lines 33-56, is responsible for overseeing assignments (see: Col. 5, lines 27-55) related to stored content at remote servers (e.g., directory and file changes). Overseeing the scheduling and completion of "jobs" related to content storage in a distributed network of remote servers is not the same as or suggestive of defining and administering the logical scope of an application. Applicant reiterates that logical application scope is a term which has been defined in the present Specification and is not the same as physical scope, which is clearly independently discussed in the Specification. What Basani does is oversee content storage at different locations in a network. Knowing the physical scope of the network is necessary for that task. However, Basani neither teaches nor suggests the definition of or use of application scope.

Applicant contends that one would not motivated to modify Gooderum with Basani. It is first to be noted that Basani's teachings of "store and forward" distribution of content (see: Col. 6, lines 2-17) contravenes Gooderum's express intent to control communications among regions. Further, Basani's use of group leaders to oversee

AUS920000828

-23-

Serial No. 09/740,088
Art Unit No. 2182

assignments at remote servers teach away from the Gooderum stated policy of packets, pieces of data and control messages being bound to a particular stack in a particular region. Even if one were to modify Gooderum with Basani, one would not arrive at the invention as claimed. The combination would result in a Gooderum system wherein each proxy would act as a group leader for relaying communications to other regions related to content storage. Clearly the combination would not obviate the invention as claimed.

Finally, with regard to Claims 5, 7, 14 and 16 the Examiner has cited Gooderum in view of Pulsipher and further in view of Basani. Claims 5 and 14 recite a step of obtaining an application scope as the span of control of an application. As argued above, none of the cited references teaches or suggests logical application scope or span of control. Moreover, none teaches or suggests that defined application scope be used during runtime to limit an application's interactions, and specifically self-replication. While replication is mentioned in Gooderum for the purpose of creating data structure for each region, there is nothing in Gooderum about self replication across regions. As acknowledged by the Examiner, neither

AUS920000828

-24-

Serial No. 09/740,088
Art Unit No. 2182

Gooderum nor Pulsipher teaches or suggests limiting replication. However, the Examiner concludes the Basani teaches limiting replication at Col. 5, lines 33-56. Applicant has reviewed the cited teachings which describe a group leader overseeing assignments related to content storage at remote servers. While replicated copies of content may be stored at the remote servers, Basani is neither teaching nor suggesting a self-replicating application and the limiting of same across a distributed network.

With respect to Claims 7 and 16, while the Examiner has cited Gooderum in view of Pulsipher and Basani, only teachings from Gooderum and Pulsipher have been used to reject the claim language. Those teachings of Gooderum and Pulsipher are the same teachings which have been discussed above in defense of the parallel language of Claims 1 and 11. Applicant relies on the arguments presented above with respect to that language and respectfully maintains that the combined teachings do not obviate the invention as claimed.

AUS920000828

-25-

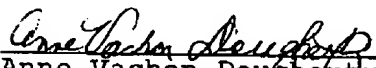
Serial No. 09/740,088
Art Unit No. 2182

Based on the foregoing amendments and remarks, Applicant respectfully requests entry of the amendments, reconsideration of the amended claim language in light of the remarks, withdrawal of the rejections, and allowance of the claims.

Respectfully submitted,

Lorin E. Ullmann

By:


Anne Vachon Dougherty
Registration No. 30,374
Tel. (914) 962-5910

AUS920000828

-26-